Nucleotide Sequence

	10	20	30	40	50	60	70	80	
1	GGACGTCGAG	GCATTACAAT	CGCGAAACCA	AGCCATAGCA	TGAAACAGCG	AGCTTGCAGC	CTCACCGACG	AGTCTCAACT	80
81	AAAAGGGACT	CCCGGAGCTA	GGGGTGGGGA	CTCGGCCTCA	CACAGTGAGT	GCCGGCTATT	GGACTTTTGT	CCAGTGACAG	160
161	CTGAGACAAC	AAGGACCACG	GGAGGAGGTG	TAGGAGAGAA	GCGCCGCGAA	CAGCGATCGC	CCAGCACCAA	GTCCGCTTCC	240
241	AGGCTTTCGG	TTTCTTTGCC	TCCATCTTGG	GTGCGCCTTC	CCGGCGTCTA	GGGGAGCGAA	GGCTGAGGTG	GCAGCGGCAG	320
321	GAGAGTCCGG	CCGCGACAGG	ACGAACTCCC	CCACTGGAAA	GGATTCTGAA	AGAAATGAAG	TCAGCCCTCA	GAAATGAAGT	400
401	TGACTGCCTG	CTGGCTTTCC	TGTTGACTGG	CCCGGAGCTG	TACTGCAAGA	CCCTTGTGAG	CTTCCCTAGT	CTAAGAGTAG	480
481	GATGTCTGCT	GAAGTCATCC	ATCAGGTTGA	AGAAGCACTT	GATACAGATG	AGAAGGAGAT	GCTGCTCTTT	TTGTGCCGGG	560
561	ATGTTGCTAT	AGATGTGGTT	CCACCTAATG	TCAGGGACCT	TCTGGATATT	TTACGGGAAA	GAGGTAAGCT	GTCTGTCGGG	640
641	GACTTGGCTG	AACTGCTCTA	CAGAGTGAGG	CGATTTGACC	TGCTCAAACG	TATCTTGAAG	ATGGACAGAA	AAGCTGTGGA	720
721	GACCCACCTG	CTCAGGAACC	CTCACCTTGT	TTCGGACTAT	AGAGTGCTGA	TGGCAGAGAT	TGGTGAGGAT	TTGGATAAAT	800
801	CTGATGTGTC	CTCATTAATT	TTCCTCATGA	AGGATTACAT	GGGCCGAGGC	AAGATAAGCA	AGGAGAAGAG	TTTCTTGGAC	880
881	CTTGTGGTTG	AGTTGGAGAA	ACTAAATTTG	GTTGCCCCAG	ATCAACTGGA	TTTATTAGAA	AAATGCCTAA	AGAACATCCA	960
961	CAGAATAGAC	CTGAAGACAA	AAATCCAGAA	GTACAAGCAG	TCTGTTCAAG	GAGCAGGGAC	AAGTTACAGG	AATGTTCTCC	1040
1041	AAGCAGCAAT	CCAAAAGAGT	CTCAAGGATC	CTTCAAATAA	CTTCAGGCTC	CATAATGGGA	GAAGTAAAGA	ACAAAGACTT	1120
1121	AAGGAACAGC	TTGGCGCTCA	ACAAGAACCA	GTGAAGAAAT	CCATTCAGGA	ATCAGAAGCT	TTTTTGCCTC	AGAGCATACC	1200
1201	TGAAGAGAGA	TACAAGATGA	AGAGCAAGCC	CCTAGGAATC	TGCCTGATAA	TCGATTGCAT	TGGCAATGAG	ACAGAGCTTC	1280
1281	TTCGAGACAC	CTTCACTTCC	CTGGGCTATG	AAGTCCAGAA	ATTCTTGCAT	CTCAGTATGC	ATGGTATATC	CCAGATTCTT	1360
1361	GGCCAATTTG	CCTGTATGCC	CGAGCACCGA	GACTACGACA	GCTTTGTGTG	TGTCCTGGTG	AGCCGAGGAG	GCTCCCAGAG	1440
1441	TGTGTATGGT	GTGGATCAGA	CTCACTCAGG	GCTCCCCCTG	CATCACATCA	GGAGGATGTT	CATGGGAGAT	TCATGCCCTT	1520
1521	ATCTAGCAGG	GAAGCCAAAG	ATGTTTTTTA	TTCAGAACTA	TGTGGTGTCA	GAGGGCCAGC	TGGAGAACAG	CAGCCTCTTG	1600
1601	GAGGTGGATG	GGCCAGCGAT	GAAGAATGTG	GAATTCAAGG	CTCAGAAGCG	AGGGCTGTGC	ACAGTTCACC	GAGAAGCTGA	1680
1681	CTTCTTCTGG	AGCCTGTGTA	CTGCGGACAT	GTCCCTGCTG	GAGCAGTCTC	ACAGCTCACC	GTCCCTGTAC	CTGCAGTGCC	1760
1761	TCTCCCAGAA	ACTGAGACAA	GAAAGAAAAC	GCCCACTCCT	GGATCTTCAC	ATTGAACTCA	ATGGCTACAT	GTATGATTGG	1840
1841	AACAGCAGAG	TTTCTGCCAA	GGAGAAATAT	TATGTCTGGC	TGCAGCACAC	TCTGAGAAAG	AAACTTATCC	TCTCCTACAC	1920
1921	ATAAGAAACC	AAAAGGCTGG	GCGTAGTGGC	TCACACCTGT	AATCCCAGCA	CTTTGGGAGG	CCAAGGAGGG	CAGATCACTT	2000
2001	CAGGTCAGGA	GTTCGAGACC	AGCCTGGCCA	ACATGGTAAA	CGCTGTCCCT	AGTAAAAATG	CAAAAATTAG	CTGGGTGTGG	2080
2081	GTGTGGGTAC	CTGTGTTCCC	AGTTACTTGG	GAGGCTGAGG	TGGGAGGATC	TTTTGAACCC	AGGAGTTCAG	GGTCATAGCA	2160
2161	TGCTGTGATT	GTGCCTACGA	ATAGCCACTG	CATACCAACC	TGGGCAATAT	AGCAAGATCC	CATCTCTTTA	AAAAAAAAAA	2240
2241	AAA								2243
	10	20	30	40	50	60	70	80	

FIG. 1A

Deduced Amino Acid Sequence

MSAEVIHQVEEALDTDEKEMLLFLCRDVAIDVVPPNVRDLLDILRERGKLSVGDLAELLYRVRRFDLLKRILKMDRKAVE
THLLRNPHLVSDYRVLMAEIGEDLDKSDVSSLIFLMKDYMGRGKISKEKSFLDLVVELEKLNLVAPDQLDLLEKCLKNIH
RIDLKTKIQKYKQSVQGAGTSYRNVLQAAIQKSLKDPSNNFRLHNGRSKEQRLKEQLGAQQEPVKKSIQESEAFLPQSIP
EERYKMKSKPLGICLIIDCIGNETELLRDTFTSLGYEVQKFLHLSMHGISQILGQFACMPEHRDYDSFVCVLVSRGGSQS
VYGVDQTHSGLPLHHIRRMFMGDSCPYLAGKPKMFFIQNYVVSEGQLENSSLLEVDGPAMKNVEFKAQKRGLCTVHREAD
FFWSLCTADMSLLEQSHSSPSLYLQCLSQKLRQERKRPLLDLHIELNGYMYDWNSRVSAKEKYYVWLQHTLRKKLILSYT
Z

FIG. 1B

Nucleotide Sequence

```
        |    10    |    20    |    30    |    40     |    50    |    60    |    70    |    80
   1 GGACGTCGAG GCATTACAAT CGCGAAACCA AGCCATAGCA TGAAACAGCG AGCTTGCAGC CTCACCGACG AGTCTCAACT 80
  81 AAAAGGGACT CCCGGAGCTA GGGGTGGGGA CTCGGCCTCA CACAGTGAGT GCCGGCTATT GGACTTTTGT CCAGTGACAG 160
 161 CTGAGACAAC AAGGACCACG GGAGGAGGTG TAGGAGAGAA GCGCCGCGAA CAGCGATCGC CCAGCACCAA GTCCGCTTCC 240
 241 AGGCTTTCGG TTTCTTTGCC TCCATCTTGG GTGCGCCTTC CCGGCGTCTA GGGGAGCGAA GGCTGAGGTG GCAGCGGCAG 320
 321 GAGAGTCCGG CCGCGACAGG ACGAACTCCC CCACTGGAAA GGATTCTGAA AGAAATGAAG TCAGCCCTCA GAAATGAAGT 400
 401 TGACTGCCTG CTGGCTTTCC TGTTGACTGG CCCGGAGCTG TACTGCAAGA CCCTTGTGAG CTTCCCTAGT CTAAGAGTAG 480
 481 GATGTCTGCT GAAGTCATCC ATCAGGTTGA AGAAGCACTT GATACAGATG AGAAGGAGAT GCTGCTCTTT TTGTGCCGGG 560
 561 ATGTTGCTAT AGATGTGGTT CCACCTAATG TCAGGGACCT TCTGGATATT TTACGGGAAA GAGGTAAGCT GTCTGTCGGG 640
 641 GACTTGGCTG AACTGCTCTA CAGAGTGAGG CGATTTGACC TGCTCAAACG TATCTTGAAG ATGGACAGAA AAGCTGTGGA 720
 721 GACCCACCTG CTCAGGAACC CTCACCTTGT TTCGGACTAT AGAGTGCTGA TGGCAGAGAT TGGTGAGGAT TTGGATAAAT 800
 801 CTGATGTGTC CTCATTAATT TTCCTCATGA AGGATTACAT GGGCCGAGGC AAGATAAGCA AGGAGAAGAG TTTCTTGGAC 880
 881 CTTGTGGTTG AGTTGGAGAA ACTAAATTTG GTTGCCCCAG ATCAACTGGA TTTATTAGAA AAATGCCTAA AGAACATCCA 960
 961 CAGAATAGAC CTGAAGACAA AAATCCAGAA GTACAAGCAG TCTGTTCAAG GAGCAGGGAC AAGTTACAGG AATGTTCTCC 1040
1041 AAGCAGCAAT CCAAAAGAGT CTCAAGGATC CTTCAAATAA CTTCAGGATG ATAACACCCT ATGCCCATTG TCCTGATCTG 1120
1121 AAAATTCTTG GAAATTGTTC CATGTGATTA ACATGGAACT GCCTCTACTT AATCATTCTG AATGATTAAA TCGTTTCATT 1200
1201 TTCTAAATGT GTTATAATGT GTTTAGCCCT TTCTTGTTGC TGTATGTTTA GATGCTTTCC AATCTTTTGT TACTACTAAT 1280
1281 AATGCTATAA AATAAATATC CTTGTACTTC TTAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA AAAAAAAAAA 1360
1361 AAAAAAAAAA AAA                                                                            1373
        |    10    |    20    |    30    |    40     |    50    |    60    |    70    |    80
```

Deduced Amino Acid Sequence

```
MSAEVIHQVEEALDTDEKEMLLFLCRDVAIDVVPPNVRDLLDILRERGKLSVGDLAELLYRVRRFDLLKRILKMDRKAVE
THLLRNPHLVSDYRVLMAEIGEDLDKSDVSSLIFLMKDYMGRGKISKEKSFLDLVVELEKLNLVAPDQLDLLEKCLKNIH
RIDLKTKIQKYKQSVQGAGTSYRNVLQAAIQKSLKDPSNNFRMITPYAHCPDLKILGNCSMZ
```

FIG. 2

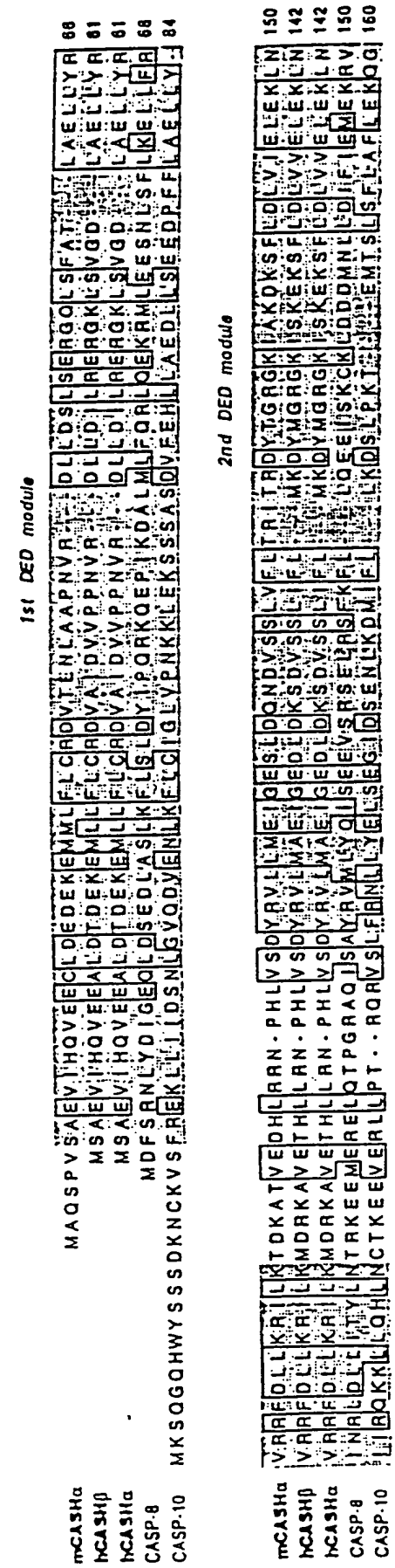

1st DED module
2nd DED module
mCASHα
hCASHβ
hCASHα
CASP-8
CASP-10
mCASHα
hCASHβ
hCASHα
CASP-8
CASP-10

FIG. 3A

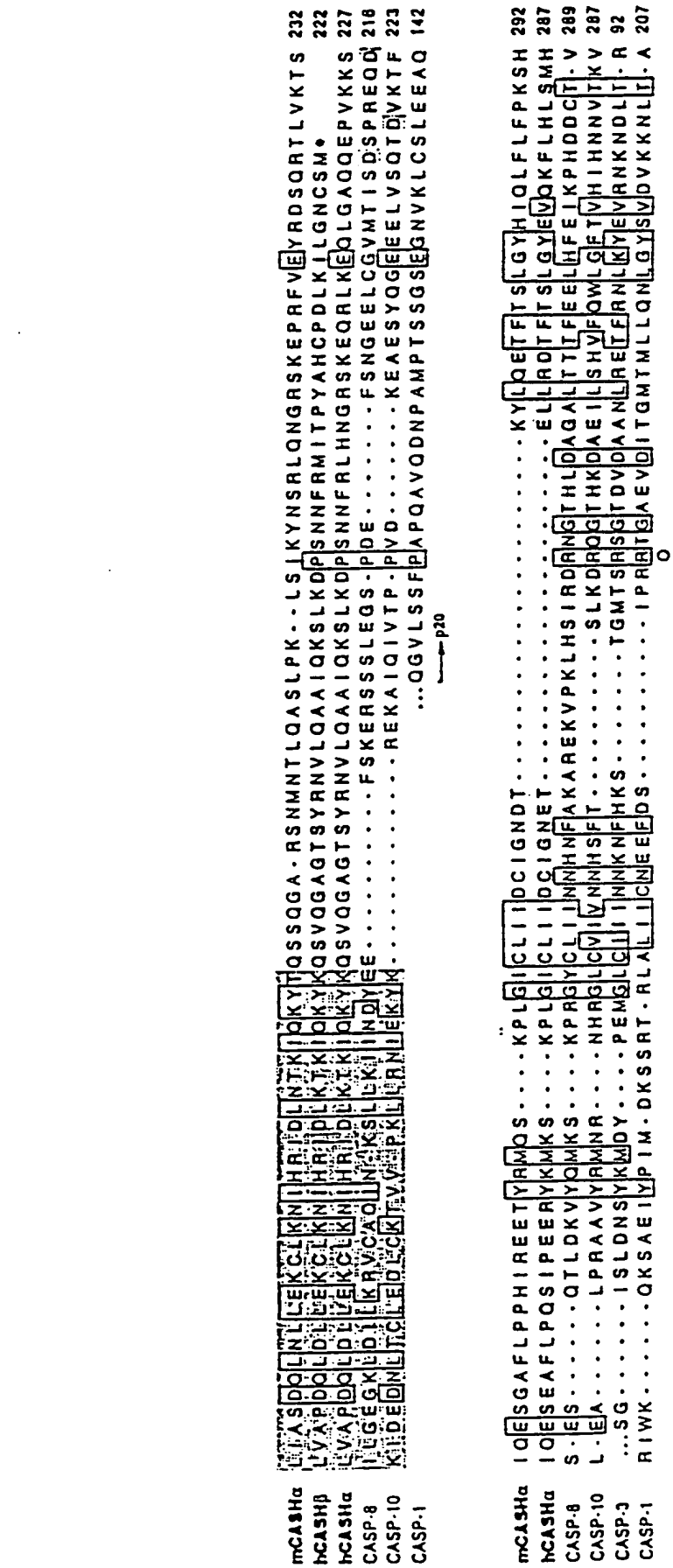

mCASHα
hCASHβ
hCASHα
CASP-8
CASP-10
CASP-1
p20
mCASHα
hCASHα
CASP-8
CASP-10
CASP-3
CASP-1

FIG. 3B

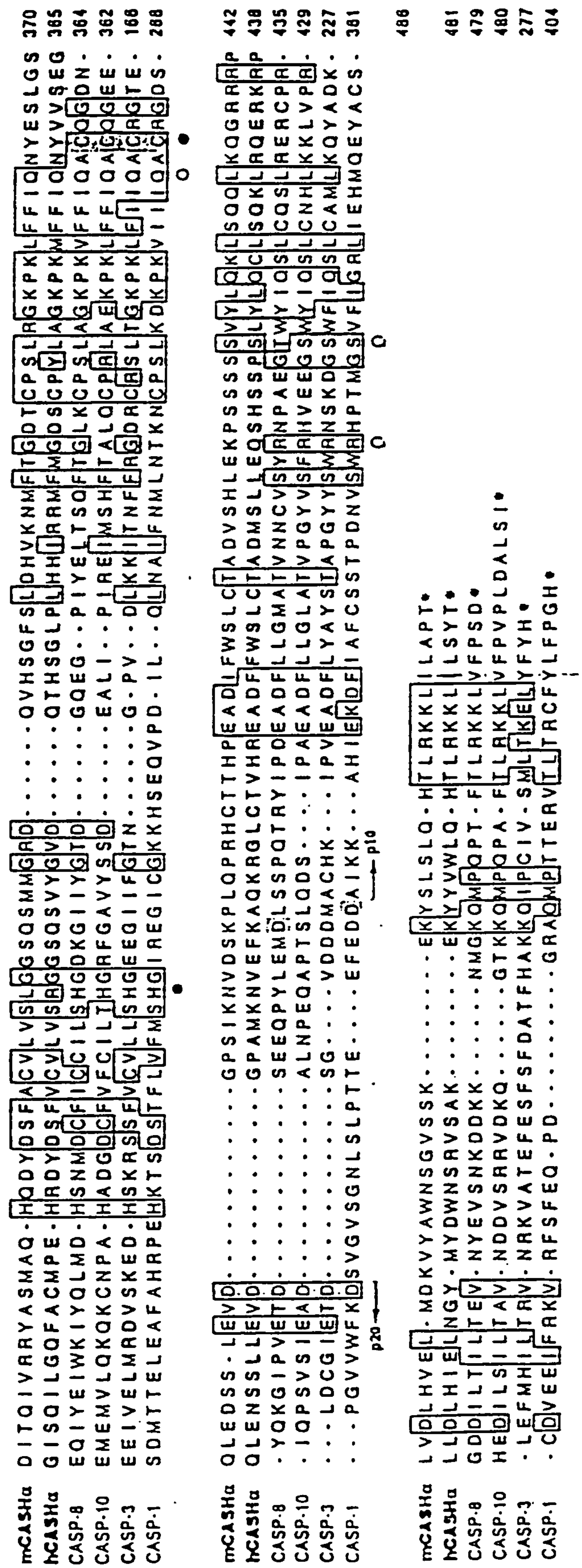
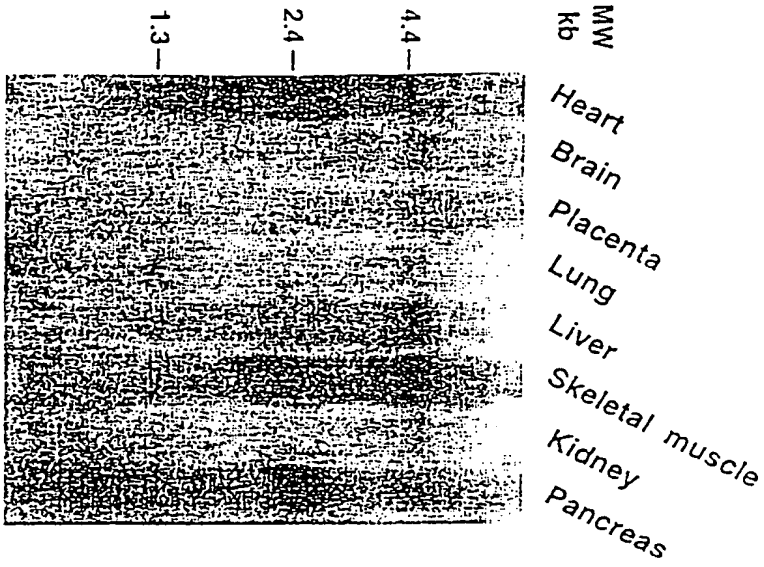


FIG. 3C

A



B

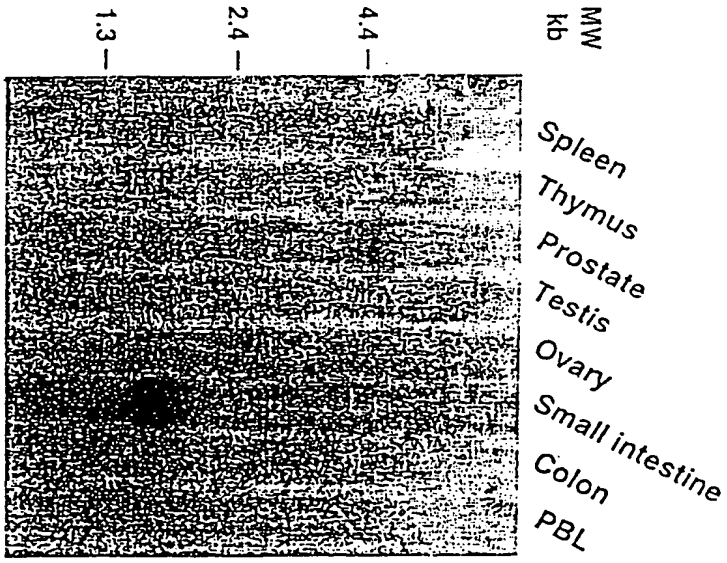


FIG. 4

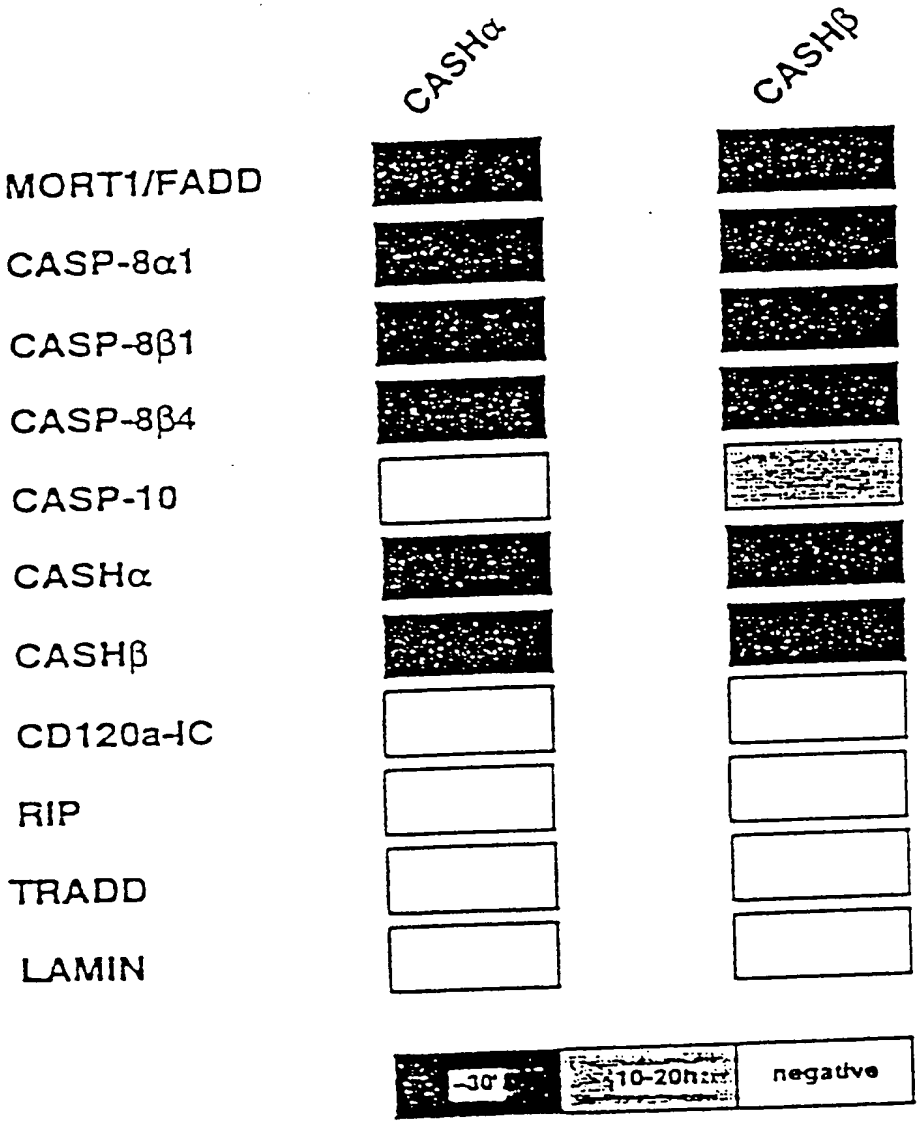

CASHα
CASHβ
MORT1/FADD
CASP-8α1
CASP-8β1
CASP-8β4
CASP-10
CASHα
CASHβ
CD120a-IC
RIP
TRADD
LAMIN
negative

FIG. 5

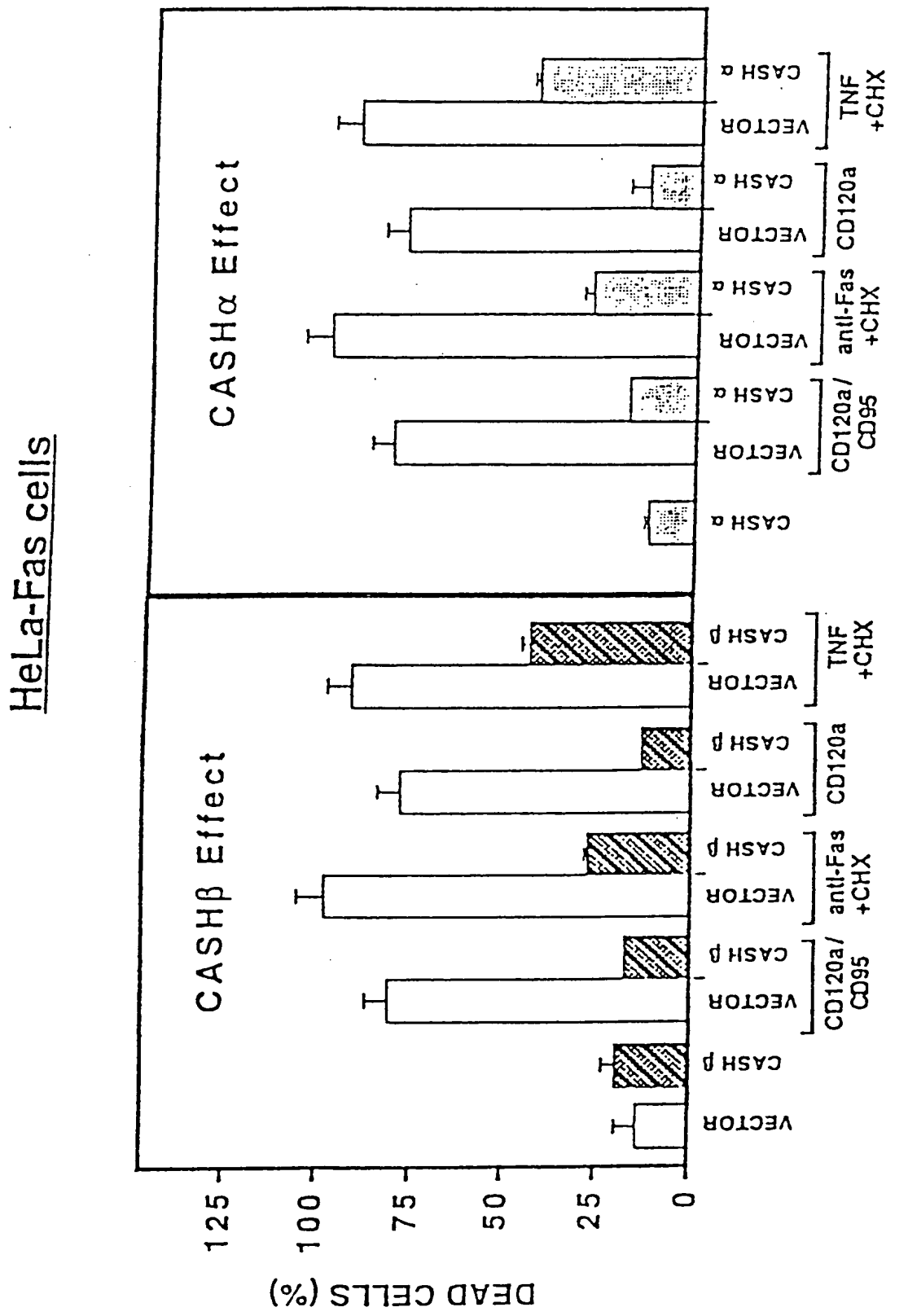

HeLa-Fas cells
CASHα Effect
CASHβ Effect
DEAD CELLS (%)
0
25
50
75
100
125
VECTOR
CASH β
VECTOR
CASH β
CD120a/ CD95
VECTOR
CASH β
anti-Fas +CHX
VECTOR
CASH β
CD120a
VECTOR
CASH β
TNF +CHX
CASH α
VECTOR
CASH α
CD120a/ CD95
VECTOR
CASH α
anti-Fas +CHX
VECTOR
CASH α
CD120a
VECTOR
CASH α
TNF +CHX

FIG. 6A

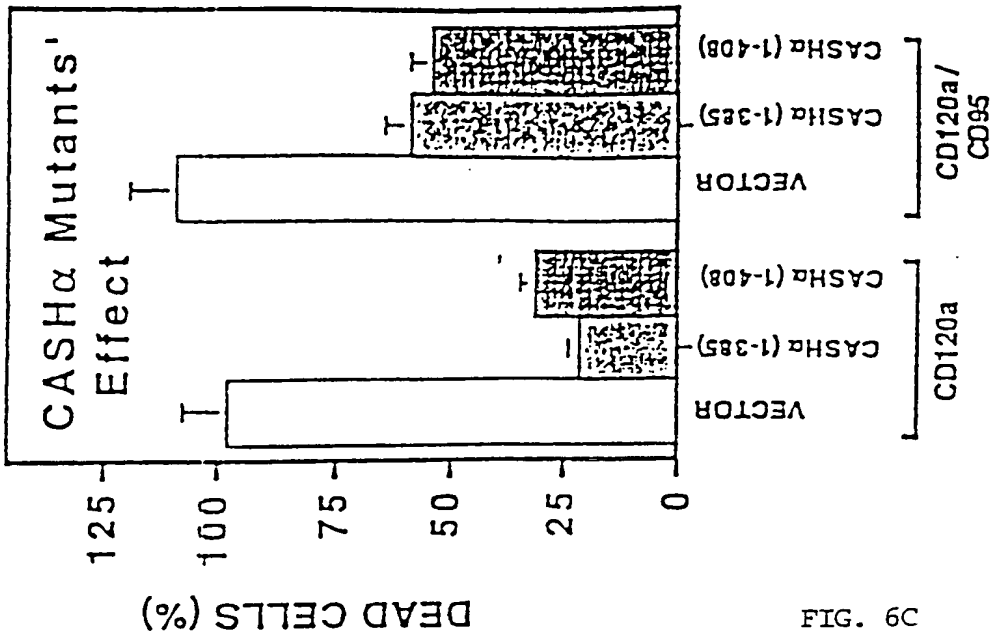


FIG. 6C

293-T cells

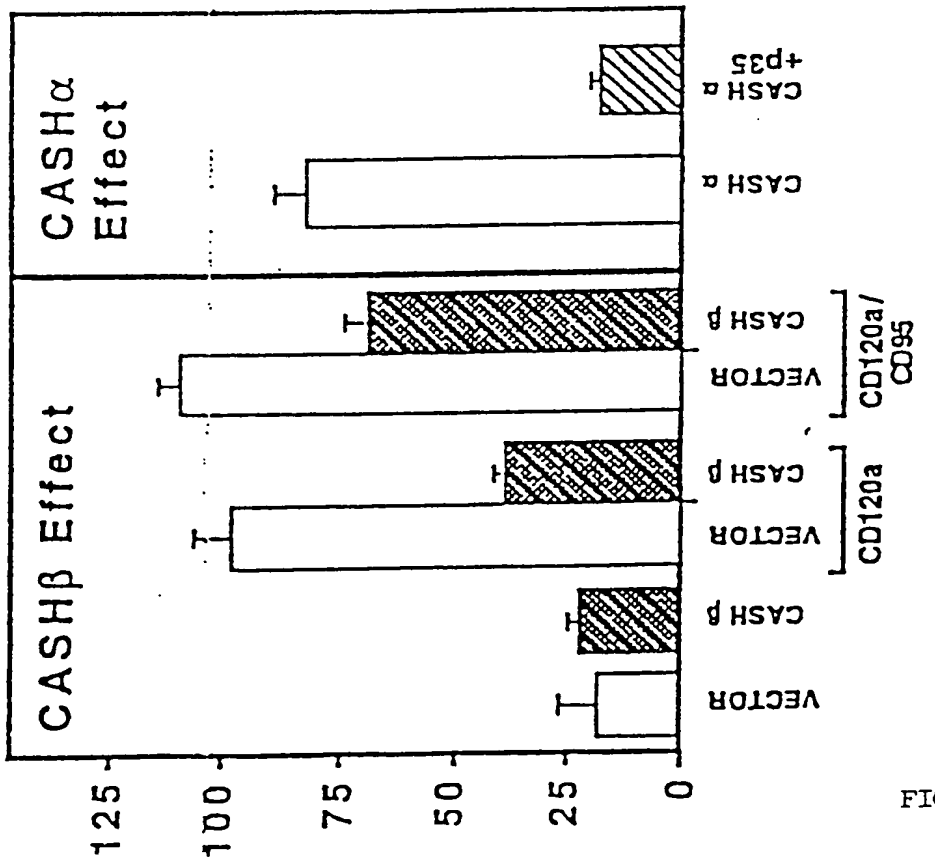
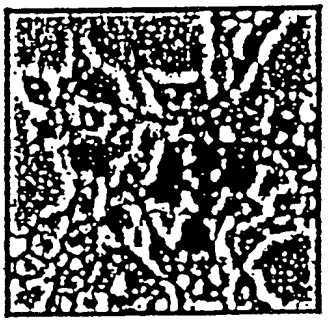


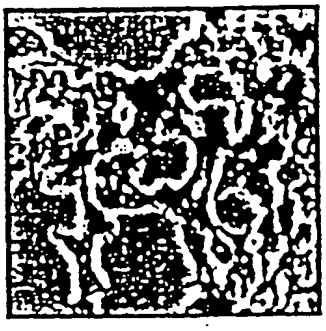
FIG. 6B

CD120a +CASH α (1-4)



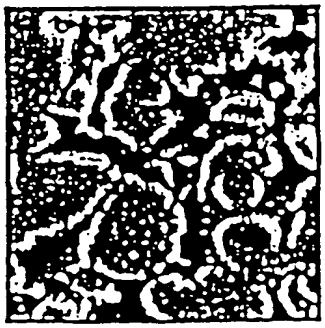
CD120a

293-T cells



CASH α

FIG. 6D



Vector